

CLAIMS:

What is claimed is:

- 1 1. A method of indexing a media element comprising:
2 identifying the media element to be indexed;
3 selecting a characterization process to be applied to said media element;
4 applying said characterization process to said media element, said
5 characterization process to include,
6 generating a data string for said media element, said data
7 string including trait information for said media element; and
8 indexing said media element using said data string.
- 1 2. The method of claim 1, wherein said media element is one of a video clip,
2 static photograph, JPEG image, animation, audio clip, and text.
- 1 3. The method of claim 1, wherein identifying the media element comprises
2 selecting the media element and loading the media element into a memory of a
3 computer system.
- 1 4. The method of claim 3, wherein loading the media element into said
2 memory comprises downloading said media element over a network connection.

1 5. The method of claim 1, further comprising determining if the media
2 element can be compressed and, if so, compressing a data file containing said
3 media element before applying the characterization process to said media
4 element.

1 6. The method of claim 1, wherein selecting said characterization process
2 comprises selecting said characterization process to be applied to said media
3 element from a plurality of characterization processes based on a predetermined
4 criteria.

1 7. The method of claim 1, wherein said characterization process further
2 includes,
3 determining at least one common pixel value of said media element, and
4 determining a relationship between a first pixel and a second pixel of said
5 media element, said first and second pixels each having said at least one common
6 pixel value.

1 8. The method of claim 7, wherein determining at least one common pixel
2 value comprises determining at least one common pixel value for said media
3 element, and wherein said relationship between said first pixel and second pixel
4 is based on a distance between said first and second pixels.

1 9. The method of claim 1, wherein applying said characterization process
2 further comprises:
3 determining at least one common pixel value of said media element;
4 determining a first tolerance for each of said at least one common pixel
5 value;
6 identifying a plurality of pixels of said media element having said at least
7 one common pixel value;
8 determining pixel locations for each of said plurality of pixels;
9 determining a second tolerance for said pixel locations; and,
10 determining relative pixel distance information for said plurality of pixels.

1 10. The method of claim 9, where generating a data string for said media
2 element comprises generating a data string for said media element, said data
3 string including trait information for said media element, said trait information
4 to be based on said at least one common pixel value and said relative pixel
5 distance information.

1 11. The method of claim 9, further comprising generating a histogram band
2 for each of said at least one common pixel value of said media element, where
3 said histogram bands are based on a percentage of a predetermined area of said
4 media element that said at least common pixel value represents.

1 12. The method of claim 9, further comprising adjusting at least one of said
2 first and second tolerances to achieve a desired result.

1 13. The method of claim 1, further comprising assigning a label to said media
2 element, and accessing said media element using said label.

1 14. The method of claim 13, wherein said label is used as a reference pointer
2 to said data string.

1 15. The method of claim 1, wherein indexing said media element comprises
2 comparing said data string for said media element to an additional data string,
3 said additional data string corresponding to an additional media element, and
4 associating the media element with the additional media element where said
5 data string and additional data string have a common trait.

1 16. The method of claim 1, further comprising displaying a result of said
2 indexing to a user.

1 17. The method of claim 1, wherein said characterization process is applied
2 only to a predetermined area of said media element.

1 18. The method of claim 1, wherein said characterization process further
2 includes determining at least one shape-based trait of said media element, said at
3 least one shape-based trait to be included in said trait information of said data
4 string.

1 19. The method of claim 1, further comprising retrieving said media element
2 by reviewing a list of labels, each of said labels corresponding to a data string
3 representing an indexed media element; and selecting said media element from
4 said list for display.

1 20. A system for indexing a media element comprising:
2 a processor;
3 a display coupled to the processor;
4 a memory coupled to the processor, the memory containing instruction
5 sequences to cause said processor to:
6 identify the media element to be indexed;
7 select a characterization process to be applied to said media
8 element;
9 apply said characterization process to said media element, said
10 characterization process to,
11 generate a data string for said media element, said data
12 string including trait information for said media element; and
13 index said media element using said data string.

1 21. The system of claim 20, wherein said media element is one of a video clip,
2 static photograph, JPEG image, animation, audio clip, and text.

1 22. The system of claim 20, wherein said instruction sequences to cause said
2 processor to identify the media element include instruction sequences to select
3 the media element and to load the media element into the memory.

1 23. The system of claim 22, wherein said media element is loaded into the
2 memory by downloading said media element over a network connection.

1 24. The system of claim 20, wherein said memory further includes instruction
2 sequences to cause said processor to determine if the media element can be
3 compressed and, if so, to compress a data file containing said media element
4 before applying the characterization process to said media element.

1 25. The system of claim 20, wherein said instruction sequences to cause said
2 processor to select said characterization process further cause said processor to
3 select said characterization process to be applied to said media element from a
4 plurality of characterization processes based on a predetermined criteria.

1 26. The system of claim 20, wherein said characterization process is further to,
2 determine at least one common pixel value of said media element, and
3 determine a relationship between a first pixel and a second pixel of said
4 media element, said first and second pixels each having said at least one common
5 pixel value.

1 27. The system of claim 26, wherein said at least one common pixel value is at
2 least one common pixel color for said media element, and said relationship
3 between said first pixel and second pixel is based on a distance between said first
4 and second pixels.

1 28. The system of claim 20, wherein said characterization process is further to:
2 determine at least one common pixel value of said media element;
3 determine a first tolerance for each of said at least one common pixel
4 value;
5 identify a plurality of pixels of said media element having said at least one
6 common pixel value;
7 determine pixel locations for each of said plurality of pixels;
8 determine a second tolerance for said pixel locations; and,
9 determine relative pixel distance information for said plurality of pixels.

1 29. The system of claim 28, where said characterization process is further to,
 2 generate a data string for said media element, said data string including
 3 trait information for said media element, said trait information based on said at
 4 least one common pixel value and said relative pixel distance information.

1 30. The system of claim 28, where said characterization process is further to,
 2 generate a histogram band for each of said at least one common pixel
 3 value of said media element, where said histogram bands are based on a
 4 percentage of a predetermined area of said media element that said at least
 5 common pixel value represents.

1 31. The system of claim 28, where said characterization process is further to,
 2 adjust at least one of said first and second tolerances to achieve a desired
 3 result.

1 32. The system of claim 20, where said memory further includes instructions
 2 sequences to cause said processor to assign a label to said media element, and to
 3 access said media element using said label.

1 33. The system of claim 32, wherein said label is used as a reference pointer to
 2 said data string.

1 34. The system of claim 20, wherein said instruction sequences to cause said
 2 processor to index said media element further includes instructions sequences to,
 3 compare said data string for said media element to an additional data
 4 string, said additional data string corresponding to an additional media element,
 5 and

6 to associate the media element with the additional media element where
 7 said data string and additional data string have a common trait.

1 35. The system of claim 20, wherein said characterization process is applied
 2 only to a predetermined area of said media element.

1 36. The system of claim 20, wherein said characterization process is further to,
 2 determine at least one shape-based trait of said media element, said at least one
 3 shape-based trait to be included in said trait information of said data string.

1 37. The system of claim 20, wherein said instruction sequences further cause
 2 said processor to retrieve said media element by displaying a list of labels, each
 3 of said labels corresponding to a data string representing an indexed media
 4 element; and to receive user input to select said media element from said list for
 5 display.